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Guidance on Groundwater Reduction Local Cooperative Solution for the Scott River Watershed

(under section 875(f)(D) of Scott-Shasta Drought Emergency Regulation)

BACKGROUND

On August 17, 2021, the State Water Resources Control Board (State Water Board) adopted a drought emergency regulation establishing drought emergency minimum flows in the Scott River and Shasta River watersheds. (Cal. Code Regs., tit. 23, §§ 875–875.9.) The regulation was reviewed and approved by the Office of Administrative Law and went into effect upon filing with the Secretary of State on August 30, 2021. The regulation will remain in effect for one year but may be repealed earlier if water supply conditions improve. The State Water Board may readopt the regulation if drought conditions continue.

Under the regulation, individuals or groups may propose local cooperative solutions (LCSs) for approval by the Deputy Director for the Division of Water Rights (Deputy Director) as an alternative means to curtailment. An LCS provides for an alternate means of reducing water use to meet or preserve drought emergency minimum flows, or to provide other fishery benefits (such as cold-water refugia, localized fish passage, or redd protection). Various options for an LCS are described in more detail under **Regulation** section 875, subdivisions (f)(1) through (f)(4). These options were developed based on input from local stakeholders to allow for submission of a broad range of actions to increase flow certainty, allow flexibility in operations, and take actions to provide localized fishery benefits. During regulation development, some stakeholders requested greater guidance on what would be necessary for an LCS to be approved, and expressed that the ability to have certainty early in the year can be valuable for many operations. LCS proposals will be posted on the State Water Board's Scott River and Shasta River Watersheds Drought Response [website](#).

OVERVIEW OF GROUNDWATER LOCAL COOPERATIVE SOLUTION

Section 875, subdivision (f)(D) provides for a specific type of LCS that is already determined to be sufficient for Deputy Director approval if an applicant reduces their overlying or adjudicated¹ groundwater use by a certain amount over the entire irrigation season. (This LCS option is not available for surface water or appropriative groundwater diversions.) This LCS was developed to allow ranchers and farmers with overlying or adjudicated groundwater rights the ability to avoid the risk of curtailments through annual planning and actions that result in overall reductions in water use that can then contribute to instream flows. Overlying groundwater rights and adjudicated groundwater rights in the Scott River watershed are like riparian rights to surface water – the rights are “correlative.” This means that everyone gets a share of the whole supply based on the need on the land its being used on. In times of shortage, diversions are reduced proportionally as a group, correlative to other overlying users. Overlying groundwater rights and adjudicated groundwater rights in the Scott River watershed are very senior in priority, and as a group have a delayed impact on

¹ Applicable adjudicated groundwater rights are those adjudicated groundwater diversions for irrigated agriculture described under in section 875.5, subdivision (a)(1)(A)(ix) [Scott River].

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streamflows relative to the time of diversion. These aspects of groundwater rights informed the concept of the groundwater reduction LCS.

In the Scott River watershed, a 30 percent reduction of overlying groundwater use as compared to the previous irrigation season (2021) or 2020 will qualify for an LCS under this provision. The Scott Valley Integrated Hydrologic Model (SVIHM) developed by UC Davis indicates that ceasing groundwater pumping for alfalfa irrigation by July or August in the Scott River groundwater basin in dry years would result in improved instream flow conditions at the United States Geological Survey (USGS) Fort Jones gage during October through December. ([Digest](#), p. 61.) During the dry season when stream reaches are dry due to low groundwater levels, stream flows cannot recover until groundwater levels rise due to reduced groundwater pumping or significant precipitation occurs. Spreading out the reduction over the entire irrigation season could help minimize, delay or prevent the disconnection of streams in the dry season, and has the potential to delay, reduce, or prevent curtailments in the watershed. Since the end of the year is the most likely time for very senior water rights to be curtailed, allowing senior users to proactively reduce water use (in essence self-curtailing a portion of water use), allows for increased certainty without injuring other water users who do not choose to enter an LCS.

The potential success of this strategy increases with the number of acres and participants implementing the LCS. This LCS can be implemented on various scales: (a) groundwater basin-wide; (b) groundwater-sub-basin-wide; or (3) any number of individual local cooperative solutions totaling at least 400 irrigated acres. An LCS may be drafted to allow additional users to join an agreement – including individual groundwater users with fewer than 400 acres. This means that groundwater users controlling fewer than 400 acres would have the potential to partner with an approved LCS by agreeing to the same or comparable actions or to develop a new LCS by joining with other users to reach 400 acres. There is no requirement that the areas of land combining under an LCS be neighboring parcels. This allows for greater participation by overlying and adjudicated groundwater diverters should they desire the benefits of a groundwater LCS (i.e., greater certainty against future curtailments by planning ahead and making groundwater reductions).

The LCS must be based on a binding agreement with a Coordinating Entity.² This gives the LCS an additional layer of reliability. Because of the long-standing history in the Scott Valley of residents undertaking actions for fisheries benefits, there are many organizations and agencies in the area with history of developing and evaluating water-related agreements that may serve as coordinating entities.

² A Coordinating Entity is an entity with the expertise and the ability to evaluate and require performance of the agreement, for example with the California Department of Fish and Wildlife, the National Marine Fisheries Service, the Scott Valley and Shasta Valley Watermaster District, a nonprofit organization with expertise and experience in water-saving transactions, or similar qualified entity.

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APPLICANT DETAILS

The LCS proposal should include the name and contact information for the applicant and reference the request is being submitted pursuant to Section 875, subdivision (f)(D) of the regulation. The proposal should identify if the applicant is an overlying or adjudicated groundwater diverter for irrigated agriculture as described in section 875.5, subdivision (a)(1)(A)(ix) [Scott River]. The proposal should also identify the Coordinating Entity, which is discussed further below.

TOTAL LANDS/WATER RIGHTS SUBJECT TO LCS

The proposal should include information regarding the ownership (e.g., may be ownership, lease, etc.) of the land, including the specific parcels (i.e., parcel numbers) and number of acres that will be covered by the proposal. Additionally, the proposal should include relevant information about the affected groundwater wells and other water sources, and other relevant information including the amount of water diverted in the prior year (2021) or 2020. For adjudicated rights, this includes identifying the adjudicated groundwater right. For overlying groundwater rights, this should include a description of land, wells, and water sources, and a statement that the rights are overlying. For overlying and adjudicative rights, the proposal should reference the SG number provided as part of any relevant curtailment orders issued. If a map is helpful in describing this information proposal, it may be included as part of the proposal. The proposal should include an estimate of total water use for the proposal (broken down as appropriate by water source or acres if served by different sources) and water that will be saved relative to prior year (2021) or 2020, and sources.

PROPOSED ACTIONS TO REDUCE WATER USE

There are a variety of actions that one may implement to reduce groundwater diversion and use associated with irrigated agriculture as compared to the prior irrigation season (2021) or to 2020. Such actions may include water efficiency improvements (e.g., flood irrigation versus pivots, soil moisture sensors), cropping decisions (e.g., planting grain rather than alfalfa), and other conservation measures (e.g., fallowing a portion of lands, forgoing a third or fourth cutting of alfalfa).

CALCULATIONS

The proposal should clearly establish the estimated 30 percent reduction (net for all included lands) this year (2022) during the irrigation season (April 1 – October 31) based on the water reduction actions. This must include a 30 percent net reduction over the irrigation season, and at least a 30 percent reduction for each month from July 1 through October 31. This could mean reducing 30 percent evenly across the irrigation season, or using comparatively more water in Spring and less in Summer and Fall. The proposal must include use estimates for the prior year (2020 or 2021) to compare to the 30 percent reduction from combined water sources. The proposal must include some evidence to support the previous water use estimate (for 2020 or 2021) and the 30 percent reduction for this year (2022).

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A 30 percent reduction must be demonstrated by evidence that provides a reasonable assurance that the change in farming practice or other actions results in at least the relevant proportionate reduction in water use. Reasonable assurance means enough evidence to determine that the reductions in water use will occur. Given the need to address the drought emergency and to allow for timely implementation, absolute certainty is not required and an LCS may be based on estimates and best available information. Such evidence may include, but is not limited to:

- Information on past water use (e.g., pumping reports, electric bills, information on crops, information on irrigation system, acreage, watering practices);
- Actions that will be taken to reduce water use;
- Estimation of water saved from these actions, relying on things like:
 - scientific evaluations of water-saving technology;
 - crop demand estimates;
 - scientific evaluations of conservation measures; or
 - acreage measurements.

AGREEMENT

The applicant will need to identify and consult with a Coordinating Entity that can ensure implementation of the LCS. The applicant and Coordinating Entity shall have a binding agreement that implements the actions for water use reduction, including any necessary monitoring to demonstrate that the actions are in place. The agreement should include assurances that the applicant will not transfer water saved under the LCS actions to parcels not included under the LCS, or otherwise take actions outside of the LCS that diminishes the overall 30 percent reduction established in the agreement. The agreement should ensure that the Coordinating Entity can reasonably access the lands associated with the proposal as relevant for monitoring compliance (e.g., an agreement to inspect crops, irrigation systems, and other water reduction actions). The binding agreement should be submitted to the Deputy Director as part of the LCS proposal.

ENFORCEMENT

Failure to comply with an approved LCS is subject to enforcement as a failure to comply with the regulation. For an LCS joined by more than one party, failure by one party to comply with the LCS does not subject the other parties to enforcement actions.

CONTACT

Questions regarding groundwater reduction LCS proposals may be directed to Adam Weinberg, Environmental Scientist in the Instream Flow Unit, by email at: adam.weinberg@waterboards.ca.gov.